

CLAIMS

1. A variable optical attenuator comprising:

a first collimator retaining an input fiber;

a second collimator retaining an output fiber; and

an attenuating means having two anamorphic prisms for respectively expanding and shrinking parallel light beam and an optical baffle positioned between the two anamorphic prisms;

wherein, the parallel light beam from the first collimator passes through one anamorphic prism, then expands to form an expanding light beam, the optical baffle is moveable to block part of the expanding light beam, and another part of the expanding light beam is shrunk by the other anamorphic prism, then is received by the second collimator and outputs from the output fiber.

2. The variable optical attenuator as claimed in claim 1, further comprising a base defining a groove and a carrier received in the groove for fixing the baffle thereon, and the two anamorphic prisms symmetrically assembled on the base about the groove.

3. The variable optical attenuator as claimed in claim 2, wherein the base further comprises two opposite walls extending upwardly from two opposite ends of the base, and the two walls define two opposite through holes for mounting the first and second collimators therein.

4. The variable optical attenuator as claimed in claim 1, wherein the anamorphic prism has two unparallel opposite surfaces, the light beam passes through the two surfaces and is perpendicular to one of the two surfaces.

5. A variable optical attenuator comprising:

a first collimator;

a second collimator;

a first anamorphic prism, a second anamorphic prism, a third anamorphic prism and a forth anamorphic prism orderly positioning in parallel light beam from first collimator; and

an optical baffle for blocking part of the light beam;

where in parallel light beams coming from the first collimator pass through the first and the second anamorphic prisms, then expand to form an expanded light beams, the optical baffle is moveable to block a part of the expanded light beams, the remaining part of the expanded light beams are shrunk by the third and forth anamorphic prisms, then are received by the second collimator.

6. The variable optical attenuator as claimed in claim 5, wherein the first collimator retains an input fiber for inputting light beams, the second collimator retains an output fiber for outputting the light beams.

7. The variable optical attenuator as claimed in claim 5, further comprising a base defining a groove and a carrier received in the groove for fixing the baffle thereon, wherein the forth and the third anamorphic prisms are symmetrically arranged with respect to the first and the second anamorphic prisms, and four anamorphic prisms are assembled on the base.

8. The variable optical attenuator as claimed in claim 7, wherein the base further comprises two opposite walls extending upwardly from two opposite ends of the base, the two walls defining two opposite through holes for mounting the first and second collimators therein.

9. The variable optical attenuator as claimed in claim 5, wherein each anamorphic

prism has two unparallel opposite surfaces, and the light beam passes through the two surfaces and is perpendicular to one of the two surfaces.

10. A variable optical attenuator comprising:

a first collimator retaining an input fiber;

a second collimator retaining an output fiber; and

an attenuating means having an expanding device for expanding parallel light beam from the first collimator and an optical baffle for blocking part of the light beam;

wherein, parallel light beam from the first collimator passes through the expanding device, then expands to form an expanding light beam, the optical baffle is adjustably moveable to block part of the expanded light beam, and thus another part of the expanded light beam is adapted to be received by the second collimator and outputs from the output fiber.

11. The variable optical attenuator as claimed in claim 10, wherein said expanding device includes at least one anamorphic prism for expanding light beam.

12. The variable optical attenuator as claimed in claim 11, wherein said expanding device includes another anamorphic prism for shrinking the expanded light beam, which is symmetrically arranged to the at least one anamorphic prism for expanding the parallel light beam.

13. The variable optical attenuator as claimed in claim 11, wherein the at least one anamorphic prism has two unparallel opposite surfaces, the light beam passes through the two surfaces and is perpendicular to one of the two surfaces.

14. The variable optical attenuator as claimed in claim 10, further comprising a base defining a groove and a carrier received in the groove for fixing the baffle

thereon.

15. The variable optical attenuator as claimed in claim 14, wherein the base further comprises two opposite walls extending upwardly from two opposite ends of the base, and the two walls define two opposite through holes for mounting the first and second collimators therein.